ABOUT THE PROTOTYPE

The hull is a highly modified, fifty year old Sunfish hull; the wings are Clark Foam sailboard blanks of the mid-eighties and the 90 sq. ft. sail was professionally made using sailcloth of the Hobie 16. The aluminum mast and boom are from an MFG Sidewinder of the sixties. All fittings, lines, etc., are ordinary off-the-shelf marine grade hardware.

The original hull at approximately 130 pounds increased to 195 pounds with the modifications and to 246 pounds, all up weight. I add 150 pounds.

DESIGN AND SAILING HIGHLIGHTS

Although the ten foot sailboards were normal for sail boarding, their front half required a small hull to provide a minimum wing area to deck area. The Sunfish hull provided a reasonable fit although it has too much keel rocker and too much boattailing.

The small buoyancy volume of a wing does not produce near enough roll buoyancy at the low speed of tacking. Gusty winds or waves will cause some wild roll oscillations when coming about. However, when up to speed with the leeward wing on the water, it's a different boat. With each wing having a ten degree dihedral, a heel will rotate the leeward wing up to fifteen degrees as a limiting angle. Any further roll will bury the wing too far and the boat may roll over. However, with the leading edge wing rocker, the roll will usually slow down, giving the sailor time to move outboard on the windward wing, or to ease off on the mainsheet. As it is now, it is easier to push out on the wing than to move inward when the wind luffs. Also, with the forestay and shrouds both attached to the mast below the foam floation, at 5 feet from the masthead, there seems to be some bending of the mast with reduced sail efficiency. The boom vang also needs to be refined. However, one clear message is that with Twister Wings, the boat will always sail close to upright, in any wind.

The tests have confirmed that the flared seat version shown in Figs. 5 and 6 in the patent application is a necessity. Whatever hull the wings are mated to, the wings must have a large buoyancy volume outboard. Fortunately, this will accommodate both rapid crew movement and outboard seating.

Since the topside design has no influence on the underside shape of the wings and hull, the Patent Claims refer only to the underside geometry of the wings.